

**WHAT IS CLAIMED IS:**

1. A method of monitoring availability status of at least one network device in an Internet Protocol (IP) network on a monitor web page, the method comprising the steps of:

(a) reading a query file and depositing query requests into a corresponding one of a plurality of request queues;

(b) reading the query requests from the corresponding request queue and sending the query requests to the at least one network device by sending calls over the IP network;

(c) receiving a reply to the calls from the at least one network device indicating an availability status of the at least one network device and processing the availability status;

(d) depositing the processed availability status in a Web Site Queue; and

(e) retrieving the processed availability status from the Web Site Queue and displaying status information from the at least one network device on the monitor web page, said status information derived from the processed availability status.

2. The method recited in Claim 1, wherein steps (a)-(d) are repeated periodically for each at least one network device.

3. The method recited in Claim 1, wherein step (e) is repeated periodically, thereby updating the status information on the monitor web page at regular intervals.

4. The method recited in Claim 1, wherein steps(a)-(e) are performed upon operator command for an operator specified at least one network device.

5. The method recited in Claim 1, wherein the query information includes the names, locations, and types of tests required for the at least one network device.

6. The method recited in Claim 1, wherein the call to the at least one network device includes a request for a reply and traverses a network path using the same network layers as messaging applications which communicate with the at least one network device for purposes other than monitoring, thereby verifying the availability of the at least one network device.

7. The method recited in Claim 1, wherein step (d) includes the further step of depositing the processed availability status in a Status Queue.

8. The method recited in Claim 7, wherein the processed availability status is retrieved from the Status Queue periodically and stored chronologically, thereby providing historical data for the at least one network device.

9. The method recited in Claim 8, wherein the historical data is analyzed for the at least one network device, thereby calculating and reporting the average, minimum, maximum, and standard deviation of the historical data, for viewing on the monitor web page.

10. The method recited in Claim 9, wherein a multivariate regression analysis is also performed on related historical data to ascertain a cause and effect relationship and to obtain a correlation factor, a result of the multivariate regression analysis being reported for viewing on the monitor web page when the correlation factor is greater than a predetermined value.

11. The method recited in Claim 1, wherein the monitor web page receives information regarding planned shutdowns of the at least one network device and displays the planned shutdown information accordingly.

12. The method recited in Claim 1, wherein the monitor web page displays a plurality of status LEDs, each status LED corresponding to and providing an availability status indication for a respective one of the at least one network devices.

13. The method recited in Claim 12, wherein the each status LED displays green, yellow, and red when the respective network device state is available, abnormal, and unavailable, respectively.

14. The method recited in Claim 12, wherein additional detail information is viewable for the respective network device, the detail information including throughput amount, a time and date of each test, a test type, a data rate, and a network device identifier.

15. The method recited in Claim 12, wherein the monitor web page displays a plurality of summary LEDs, each summary LED indicating whether at least one error occurred during a respective set of tests of the at least one network device.

5 16. The method recited in Claim 13, wherein the respective network device's state is abnormal when a data range of the respective network device is outside a control band of DATA POPULATION AVERAGE  $\pm 3 \times$  (DATA POPULATION STANDARD DEVIATION).

10 17. A method of monitoring availability status of a plurality of network devices in an Internet Protocol (IP) network on a monitor web page, the method comprising the steps of:

(a) reading a query file and depositing query requests into a corresponding one of a plurality of request queues;

15 (b) reading the query requests from the corresponding request queue and sending the query requests the plurality of network devices by sending calls over the IP network;

(c) receiving a reply to the calls from the plurality of network devices indicating an availability status of the plurality of network devices and processing the  
20 availability status;

(d) depositing the processed availability status in a Web Site Queue; and

(e) retrieving the processed availability status from the Web Site Queue and displaying status information from the plurality of network devices on the monitor web page, said status information derived from the processed availability status.